April 29, 2016

Distributed via Email: Adam.Hockin@gov.bc.ca

Adam Hockin
Planning Forester, FLNRO
Timber Operations, Pricing and First Nations Division
BC Timber Sales - Strait of Georgia

Dear Adam Hockin:

Re: **Heritage status of scarred yellow cedars in TSL A87126 Block DK044.**

The Archaeology Branch (the Branch) has completed it's review of Millennia Research Ltd.'s (Millennia) *Block DK044 Archaeological Impact Assessment Interim Report (2012-0218)*, dated December 7, 2015. The conclusions of this report were compared with those of Baseline Archaeological Services Ltd.'s (Baseline) in *Archaeological Impact Assessment Interim report for TSL A87126 Block DK044,* which was conducted under HCA permit 2012-0218, dated February 5, 2015. Coast Interior Archaeology's (Coast) 2012 *Preliminary Field Reconnaissance of proposed BCTS cutblock (DK44, TSL A79517)* and email correspondence between Norm Kemp, BCTS and Stefan Zeglen, Forest Pathologist, Ministry of Forests, Lands and Natural Resource Operations (MFLNRO), dated September 10, 2013 were also taken into consideration. A background summary of the controversy surrounding the protected status of the yellow cedar in Block DK 044 is provided below, followed by a synopsis of the of the opposing opinions by Baseline and Millennia, and finally the Branch conclusions and recommendations.

My understanding of the background that brought us to this point is as follows:

- **2011** – Baseline conducted the initial preliminary field reconnaissance (PFR) of DK 044 on behalf of BCTS, with negative results for cultural resources.
- **July 2016** - Coast conducted a PFR on behalf of Elphinstone Logging Focus (Elphinstone), which identified 33 potentially yellow cedar Culturally Modified Trees (CMTs) within five clusters and recommended an archaeological impact assessment (AIA).
- **August 2013** –An AIA was conducted by Baseline on behalf of BCTS, confirming negative results for cultural resources.
- **September 2013** – Stephan Zeglen offered his professional advice that while the scars on the yellow cedar are not consistent with natural causes (i.e. bear, fire, sun scalding, broken branches, or falling trees), though there is no empirical evidence to conclude that scarring is due to human causes.

Ministry of Forests, Lands and Natural Resource Operations

Archaeology Branch

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- **September 17, 2015** – Baseline collected seven samples of scarred yellow cedars for analysis under permit 2012-0218. The results of the study concluded that the scars are most likely natural.
- **September 9, 2015** – Bush and Company Law Office, on behalf of Baseline, submitted a letter to Morley Eldridge at Millennia instructing them that they are on notice to ensure their forthcoming review of Baseline's work complies with the provision of the BCAPA.
- **November 7, 2015** – Millennia obtained the CMT stem rounds for analysis.
- **December 7, 2015** – Millennia's analysis of Baseline's original assessment concluded that the scars are most likely cultural.

Table 1: Comparison Summary of Baseline's and Millennia's conclusions:

Natural Scarring (Baseline's Conclusion)	Cultural Scarring (Millennia's Conclusions)
Modeled as low potential based on distance from streams, coast line and elevation.	Model fails to consider ethnographically recorded yellow cedar harvesting locations and recorded CMT sites are similar to the location and terrain at this location. The cultural value of yellow cedar led people to remote locations to harvest it's bark.
Scar samples produces dates of 436-656 BP, it is more logical to expect a date range of 150-200 years.	The lack of more recent scar dates is more likely a result of change in cultural patterns, as opposed to a reflection of natural processes.
Morphological similarities between possible cultural scars and definite natural scars are ambiguous and do not provide a good criteria for determining origin of scaring.	Concurs that yellow cedar responds differently to injury than western red cedar, however analysis of the stem round samples while not "classically" cultural, still concluded that there are observable morphological differences between the natural and cultural scarring.
Scarring is present on 69% of total tree stand, an indication of a natural process in effect.	The presence of naturally scarred trees should not be used as evidence for the absence of culturally scared trees.
Yellow cedar is not the dominant timber type (33% based on # of stems in cruise plots).	33% of tree stand in this block being yellow cedar is abundant enough to justify the trip to remote locations.

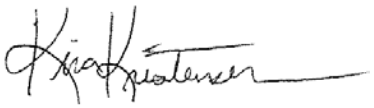
The Branch's position is that the scarred yellow cedars in Block DK044 while not definitively proven to be cultural, the evidence on balance supports the argurment for they being CMTS subject to the *Heritage Conservation Act*. This determination takes into account:

1) The opinion offered by MFLNRO forest pathologist concluded that the yellow cedar scars are not natural;

2) The mixed opinions regarding the morphological attributes of natural and cultural scarring on yellow cedars is a reflection of the lack of research and accepted methods for yellow cedar dendrochronological analysis; and
3) Ethnographic and archaeological evidence of yellow cedar use.

To assign heritage protection to these yellow cedar CMTs, the trees must be recorded to current Branch standards. Based on the information from Coast's 2012 report, 33 yellow cedars CMTs were identified with the potential for additional CMTs to be present. An archaeologist will have to be engaged to fully record and map the CMT site(s) prior to any timber harvesting or related development activities.

Sincerely,



Kira Kristensen
Archaeologist
Permitting and Assessment Section

pc: Owen Grant (Baseline) and Morely Eldridge (Millennia), via email